

Massachusetts Fosters the Weatherization Spirit

While sailing on the Mayflower, the Pilgrims dreamed of forging a better life in the New World. They envisioned an innovative society that would nurture the community and the environment. This innovative spirit provided the foundation for the first colony and continues today in Massachusetts through its partnership with the U.S. Department of Energy's (DOE) Weatherization Assistance Program (Weatherization). Weatherization reduces energy costs for low-income families by increasing the energy efficiency of their homes, while ensuring their health and safety. Massachusetts' Department of Housing and Community Development administers the program and 12 local agencies deliver weatherization services to eligible residents in every county.

WEATHERING A COLD WINTER

The Pilgrims' first winter was a harsh experience. Half of the colony's population succumbed to freezing temperatures and illness. Residents of Massachusetts still battle the severe elements; however, the Weatherization Program offers a modern solution.

Professionally trained crews use advanced technologies to determine the most cost-effective measures for each home. Advanced diagnostic tools, like the blower door or an infrared camera, are used to detect major sources of air leakage and pressure imbalances. Crews test furnaces and appliances for carbon monoxide, an odorless, colorless gas that can be deadly in large quantities.

Typical weatherization measures include blowing insulation; sealing ducts; wrapping water heaters and pipes; installing smoke detectors; and adding weatherstripping to doors and windows. Clients are educated on energy efficiency and instructed on the proper use and maintenance of installed measures. In tandem with these measures, Massachusetts uses funding from the Department of Health and Human Services (HHS) for a furnace repair and replacement program.

NATIONAL WEATHERIZATION PROGRAM

Homes weatherized in 1999	68,000
DOE allocations in 1999	\$135 million
Average annual energy cost savings per household	\$300
Average space heating savings	25-30%
Energy benefits returned for every \$1 invested	\$2.10
Jobs supported	7,000

MASSACHUSETTS

Homes weatherized in 1999 (with DOE \$)	1,884
DOE funding in 1999	\$3.8 million
Clients served in 1999	3,200
Elderly	19%
People with disabilities	28%
Families with children	53%

SEEKING RESOURCES, FINDING SUCCESS

Massachusetts seeks additional resources to supplement core DOE funding. Weatherization leverages money from the state, HHS' Low Income Home Energy Assistance Program, utilities, and other sources. In 1999, Massachusetts secured over \$9.8 million in additional resources, which allowed the program to weatherize an additional 2,954 homes. In April 2000, DOE recognized Massachusetts for successfully leveraging \$27 million. It is anticipated that the state will leverage an additional \$24 million over the next two years.

Weatherization relies on effective partnerships to further its success. The pilot Appliance Management Program (AMP) was a creative partnership between the New England Power Service Company and several weatherization agencies. The program focused on electric baseload reduction in low-income homes. The AMP installed energy-saving measures in the homes and educated occupants on ways to reduce their energy usage. The program, which produced an average annual energy savings of 1,387 kilowatt-hours per participant, has been successfully replicated by other Massachusetts electric utility programs.

INNOVATIVE STRATEGIES, IMPRESSIVE RESULTS

After their two-month ocean voyage, the Pilgrims would have appreciated Massachusetts' innovative transportation projects, like the first subway system and the new underground highway project, "The Big Dig." After experiencing the cold winters without sturdy shelter, the Pilgrims would have welcomed Weatherization and its benefits. Weatherization measures make it easier to keep a home warm in the winter, while reducing energy costs.

Weatherization produces benefits for the community as well. Currently, Massachusetts employs 200 people to operate the program. Weatherization measures also keep money in the community that would typically be exported out to pay for energy. This spurs local economic growth and creates additional jobs. Every dollar retained in the community produces an estimated \$3 in multiplier benefits.

In addition, reducing residential energy demand decreases electricity generation and avoids emissions of nitrogen oxides, sulphur dioxide, and other pollutants. This improves local air quality and reduces adverse health effects, particularly asthma.

SAVING ENERGY, SAVING LIVES

Helen Miller*, an elderly client from Boston, contacted a local weatherization agency for help with her high energy bill. A weatherization crew audited her home and conducted health and safety tests. They discovered that an alarming amount of carbon monoxide was being released from Helen's faulty heating system. It was replaced with a new, high-efficiency heating system. Additional weatherization measures were installed, including insulation in the attic and walls.



Weatherization crew member encounters a common air leakage problem during an inspection.

After receiving weatherization services, Helen can expect to see her energy use reduced by nearly one-third and experience an average annual energy savings of \$300. This is money that she can use to purchase essential goods like groceries. In February 2000, Massachusetts sponsored a walking tour of Helen's newly weatherized home to educate people about the Weatherization Program and its many benefits.

WEATHERIZATION WORKS!

Weatherization creates energy, economic, and environmental benefits for low-income households and communities. The Massachusetts Community Action Program Directors' Association recently honored the program with a plaque for maintaining "the goal of self-sufficiency for all citizens." Nationally, for every \$1 invested in the program, Weatherization returns \$2.10 in energy-related benefits. Weatherization measures reduce national energy consumption and dampen demand for imported oil. Weatherization works for Massachusetts and America!

**Names have been changed to protect the privacy of the subjects.*



TO LEARN MORE ABOUT THE WEATHERIZATION ASSISTANCE PROGRAM, CONTACT:

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Visit the Weatherization Web site at: www.eren.doe.gov/buildings/weatherization_assistance
or call the Energy Efficiency and Renewable Energy Clearinghouse at: 1-800-DOE-3732



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